# Strida Kit Installation Guide

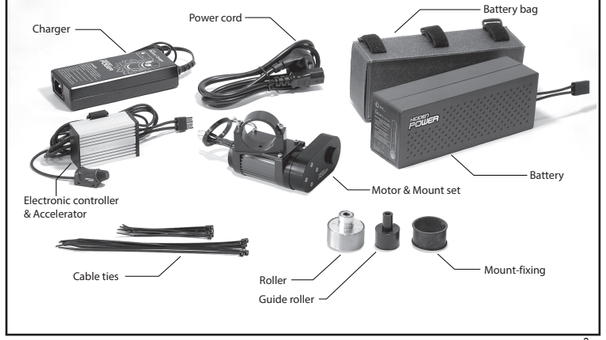
## Prior to installation

■ HiddenPower kit is released as semi-assembled and can be installed on any bicycles with the installation guide regardless of bicycle size.
If the kit is not installed in accordance with the guideline, it may cause malfunctioning, or performance issues. In order to prevent product failure, contact HiddenPower distributors for precise installation advices.
* This product is for general-purpose that can be installed on the Strida 16" and 18", the installation point may vary upon types of bicycles.
Start installation after checking and maintaining the designated tire pressure.

■ Tools for assembly
- Six-angle wrench (1.5mm/2.5mm/3mm), Nipper, Scissors, Soldering Iron, etc.

■ The principle of HiddenPower kit
HiddenPower kit is operated by driving part, which is fixed to seat tube, together with the friction roller that rolls on the road surface of tire. Thus the contacting point of roller and tire is crucial in order to deliver the maximal motor power to the tire for the best performance.

※ It is recommended to understand the standard kit operation principle through HiddenPower user manual before starting installation.
Friction roller slightly touches the road surface of the tire when the kit motor is off.
As soon as the motor runs, roller spins and gets lifted upward on the tire when roller starts to spin faster than the tire. This process of shifting of roller delivers the best torque for driving.

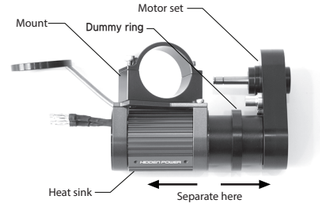




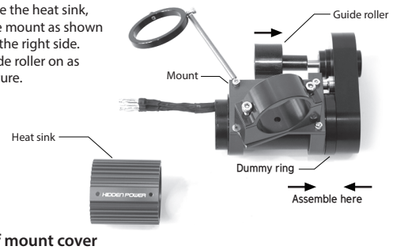

## 1 Preparation for installation

### 1-1. Separation of Motor & Mount

The motor and the mount are semi-installed and placed on the pre-set position. For installation, please detach the mount from the motor set.

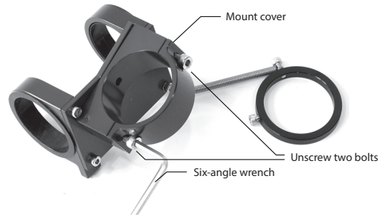



To install, separate the heat sink, and assemble the mount as shown in the picture on the right side. Then put the guide roller on as shown in the picture.




### 1-2. Separation of mount cover

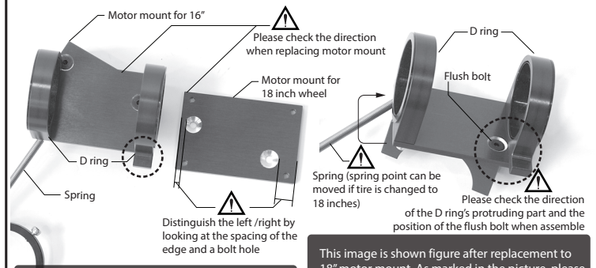
After separating the motor set, loosen two bolts from the mount cover to separate the cover and the rubber ring.






## 2 Preparation for installation

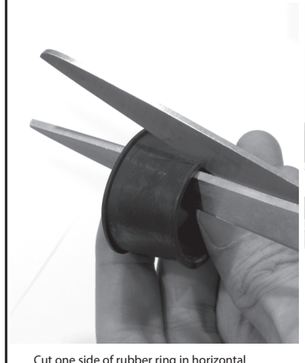
### 1-3. If wheel is 18", motor mount needs to be replaced (16" assembled when it is released)


Motor mount for 16"
Please check the direction when replacing motor mount
Motor mount for 18 inch wheel
D ring
Flush bolt
D ring
Spring
Spring (spring point can be moved if tire is changed to 18 inches)
Distinguish the left /right by looking at the spacing of the edge and a bolt hole
Please check the direction of the D ring's protruding part and the position of the flush bolt when assemble

If a bike has 18 inch wheel, its motor mount should be replaced

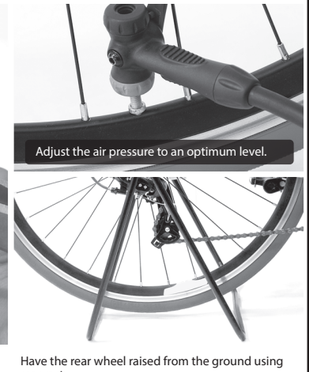
This image is shown figure after replacement to 18" motor mount. As marked in the picture, please pay attention to the point of flush bolt and D ring's, as shown in the picture

### 1-4. Rubber ring cutting



Cut one side of rubber ring in horizontal direction as shown in the picture.

### 1-5. Tire Air Pressure Adjustment



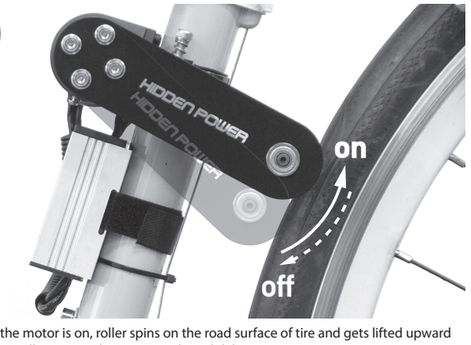

Have the rear wheel raised from the ground using rear rack.



## 3 Understanding the principle (based standard kit)

This chapter will make installation process a lot easier. Understand the mutual relation between tire and roller when the motor is on/off. And find the optimal point of motor mount and install accordingly. The friction roller directly drives the road surface of the tire

Power ON




When the motor is on, roller spins on the road surface of tire and gets lifted upward automatically, presses the tire strongly and delivers power.

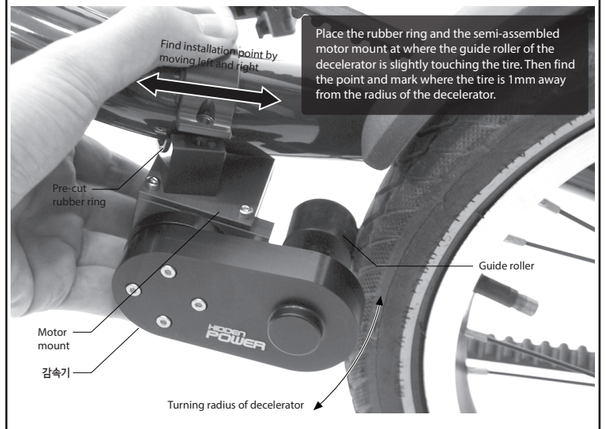
Power OFF

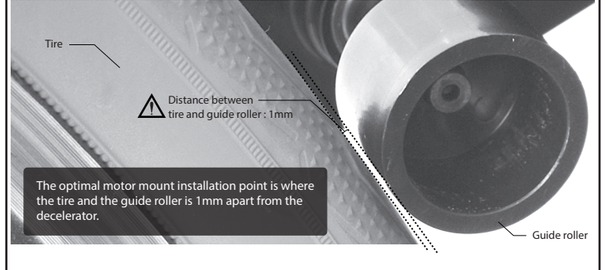
The tire automatically pushes the roller away to the original position when the motor is off.



## 4 Mount Positioning

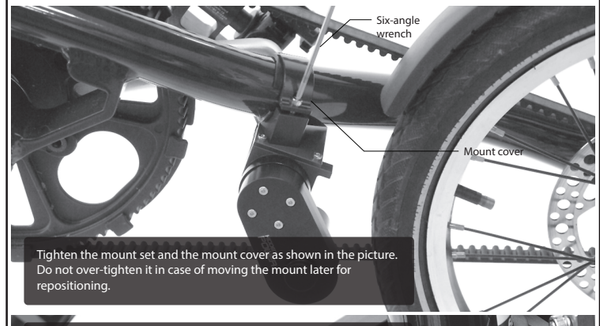
There is only one installation point for Hidden Power Conversion Kit. The point, where the tire and the guide roller is 1mm apart with decelerator moving up/down, is the optimal motor mount installation point.

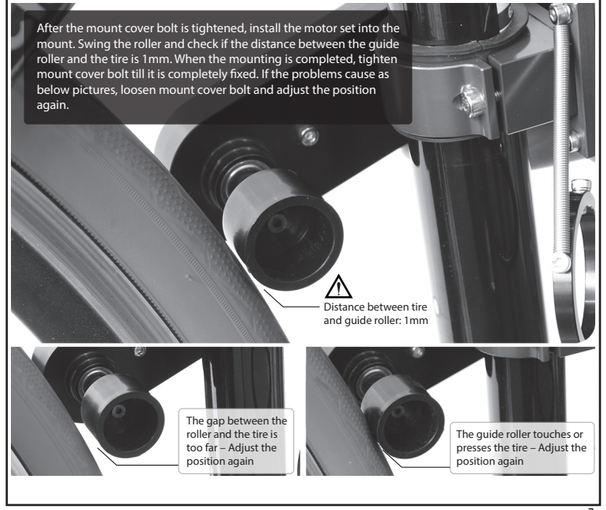

Find installation point by moving left and right
Place the rubber ring and the semi-assembled motor mount at where the guide roller of the decelerator is slightly touching the tire. Then find the point and mark where the tire is 1mm away from the radius of the decelerator.
Pre-cut rubber ring
Guide roller
Motor mount
감속기
Turning radius of decelerator


Tire
Distance between tire and guide roller : 1mm
The optimal motor mount installation point is where the tire and the guide roller is 1mm apart from the decelerator.
Guide roller



## 5 Mount Assembly

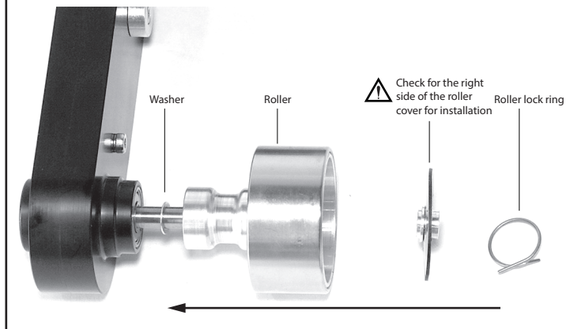

Six-angle wrench
Mount cover
Tighten the mount set and the mount cover as shown in the picture. Do not over-tighten it in case of moving the mount later for repositioning.


After the mount cover bolt is tightened, install the motor set into the mount. Swing the roller and check if the distance between the guide roller and the tire is 1mm. When the mounting is completed, tighten mount cover bolt till it is completely fixed. If the problems cause as below pictures, loosen mount cover bolt and adjust the position again.
Distance between tire and guide roller: 1mm
The gap between the roller and the tire is too far – Adjust the position again
The guide roller touches or presses the tire – Adjust the position again



## 6 Driving Roller Assembly

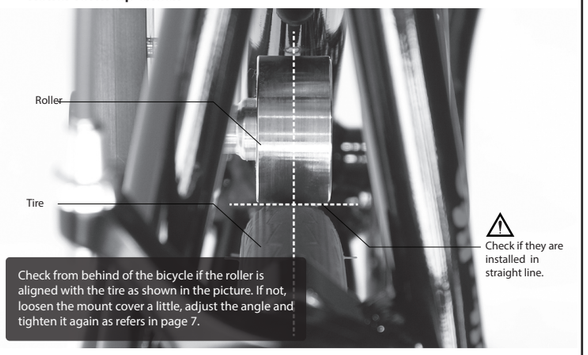
**Assemble the roller in order as shown in the picture.**




**Tighten the driving roller cover and lock ring.**

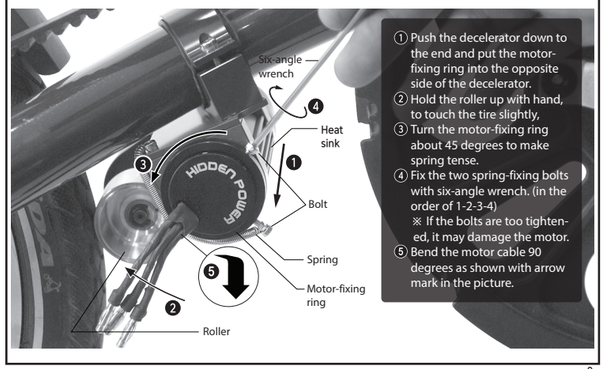
## 7 Roller Form-up Check and Motor Fix

### Roller form-up check




Check from behind of the bicycle if the roller is aligned with the tire as shown in the picture. If not, loosen the mount cover a little, adjust the angle and tighten it again as refers in page 7.

### Motor-fixing ring Assembly

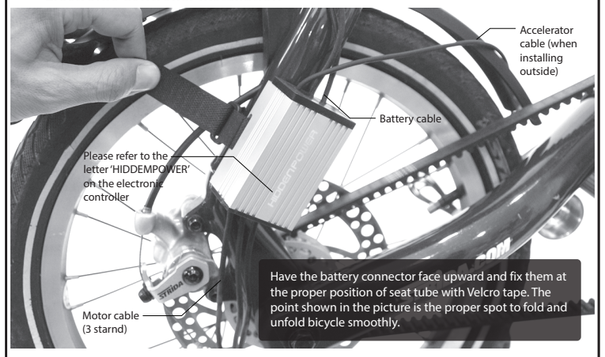



① Push the decelerator down to the end and put the motor-fixing ring into the opposite side of the decelerator.
② Hold the roller up with hand, to touch the tire slightly,
③ Turn the motor-fixing ring about 45 degrees to make spring tense.
④ Fix the two spring-fixing bolts with six-angle wrench. (in the order of 1-2-3-4)
※ If the bolts are too tightened, it may damage the motor.
⑤ Bend the motor cable 90 degrees as shown with arrow mark in the picture.



## 8 Electronic Controller Installation(cable installation to outside/outward frame-regular)

### Electronic Controller Installation


Accelerator cable (when installing outside)
Battery cable
Please refer to the letter 'HIDDEMPOWER' on the electronic controller
Motor cable (3 starnd)

Have the battery connector face upward and fix them at the proper position of seat tube with Velcro tape. The point shown in the picture is the proper spot to fold and unfold bicycle smoothly.

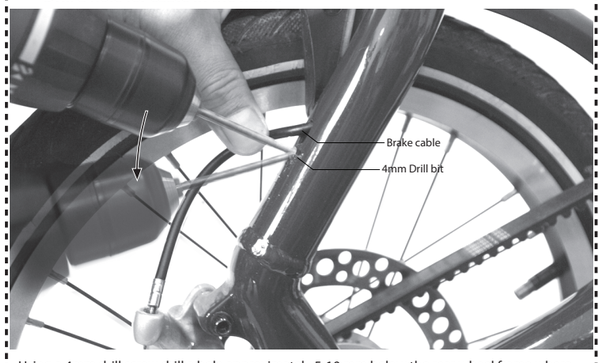
### Accelerator cable Installation

Lay out the accelerator wire that links from the handle bar to the bicycle's chair bottom then use the packaged cable ties to secure the wire. Secure the wire from the handle bar of brake's cable and accelerator cable.



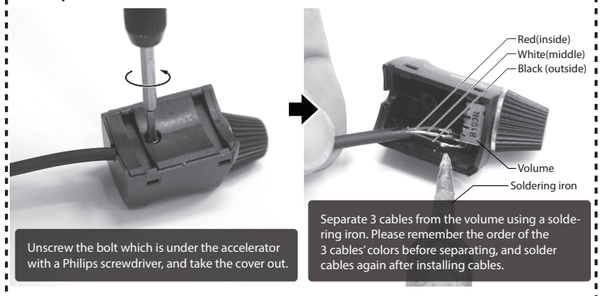
## 9 Electronic Controller Installation(Installing a cable inside the frame – For advanced user)

### Drill a hole for cable in the frame




Using a 4mm drill screw drill a hole approximately 5-10 mm below the rear wheel frame where the brake cable enters. First step is to drill perpendicularly then once the hole has been drilled expand the size of the hole similarly to the image shown. After completing the steps above use the circular line to smooth out the rough edges. This is done to avoid any damages to the wire from the transmission by the drilled holes in the frame.

### Separate cable from accelerator



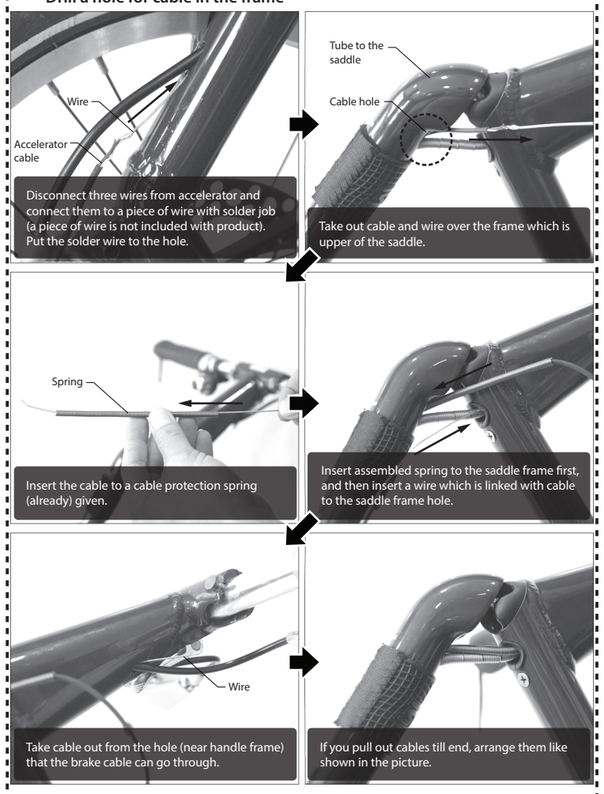

Unscrew the bolt which is under the accelerator with a Philips screwdriver, and take the cover out.

Separate 3 cables from the volume using a soldering iron. Please remember the order of the 3 cables' colors before separating, and solder cables again after installing cables.



## 10 Electronic Controller Installation(Installing a cable inside the frame – For advanced user)

### Drill a hole for cable in the frame




Disconnect three wires from accelerator and connect them to a piece of wire with solder job (a piece of wire is not included with product). Put the solder wire to the hole.

Take out cable and wire over the frame which is upper of the saddle.

Insert the cable to a cable protection spring (already) given.

Insert assembled spring to the saddle frame first, and then insert a wire which is linked with cable to the saddle frame hole.

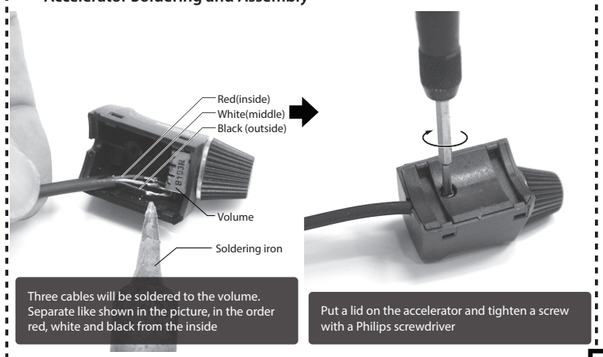
Take cable out from the hole (near handle frame) that the brake cable can go through.

If you pull out cables till end, arrange them like shown in the picture.



## 11 Electronic Controller Installation(Installing a cable inside the frame – For advanced user)

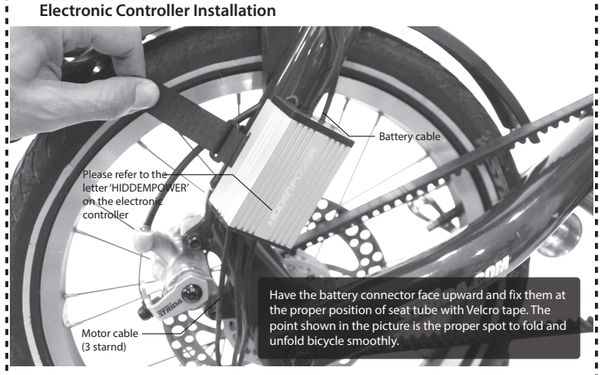
### Accelerator Soldering and Assembly




Three cables will be soldered to the volume. Separate like shown in the picture, in the order red, white and black from the inside

Put a lid on the accelerator and tighten a screw with a Philips screwdriver

### Electronic Controller Installation

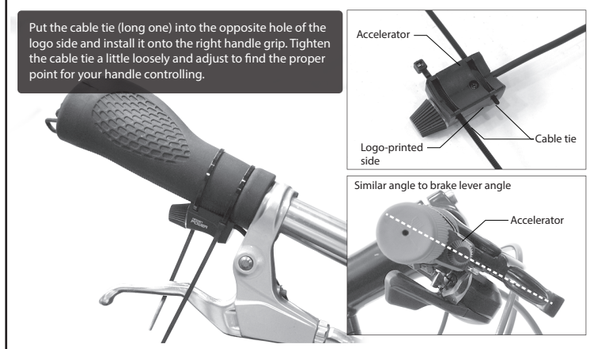



Have the battery connector face upward and fix them at the proper position of seat tube with Velcro tape. The point shown in the picture is the proper spot to fold and unfold bicycle smoothly.

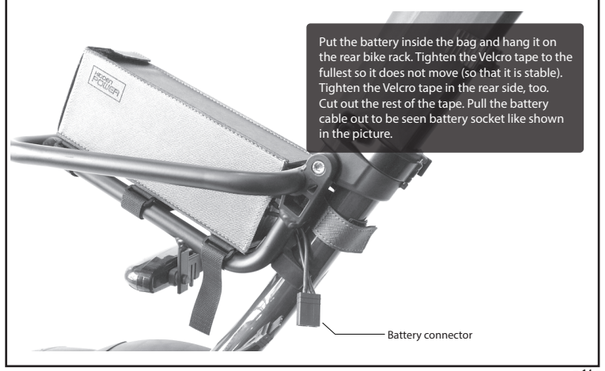


## 12 Accelerator Installation

Put the cable tie (long one) into the opposite hole of the logo side and install it onto the right handle grip. Tighten the cable tie a little loosely and adjust to find the proper point for your handle controlling.



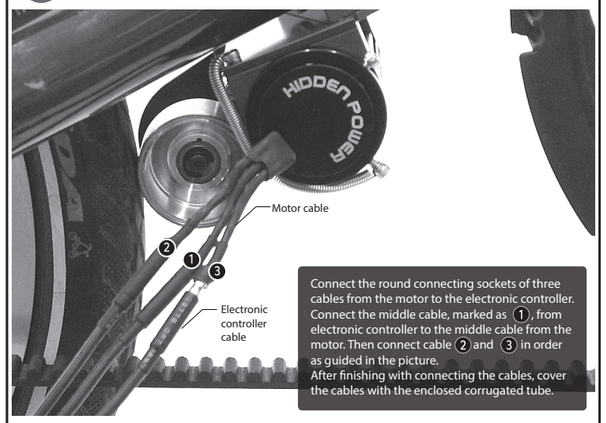

## 13 Battery Installation




Put the battery inside the bag and hang it on the rear bike rack. Tighten the Velcro tape to the fullest so it does not move (so that it is stable). Tighten the Velcro tape in the rear side, too. Cut out the rest of the tape. Pull the battery cable out to be seen battery socket like shown in the picture.

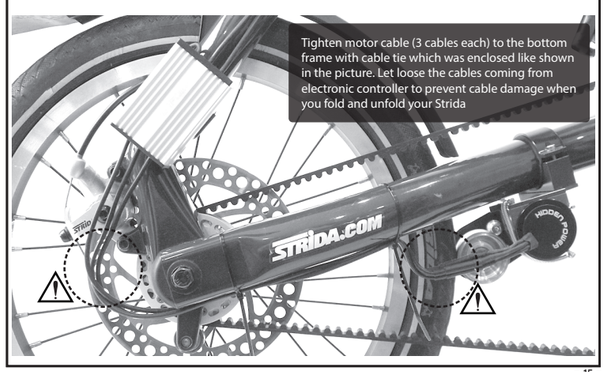


## 14 Motor Cable Connection




Connect the round connecting sockets of three cables from the motor to the electronic controller. Connect the middle cable, marked as ①, from electronic controller to the middle cable from the motor. Then connect cable ② and ③ in order as guided in the picture.
After finishing with connecting the cables, cover the cables with the enclosed corrugated tube.

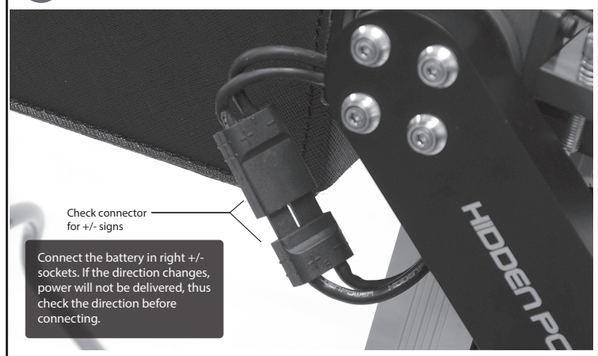
## 15 Motor Cable Arrangement




Tighten motor cable (3 cables each) to the bottom frame with cable tie which was enclosed like shown in the picture. Let loose the cables coming from electronic controller to prevent cable damage when you fold and unfold your Strida

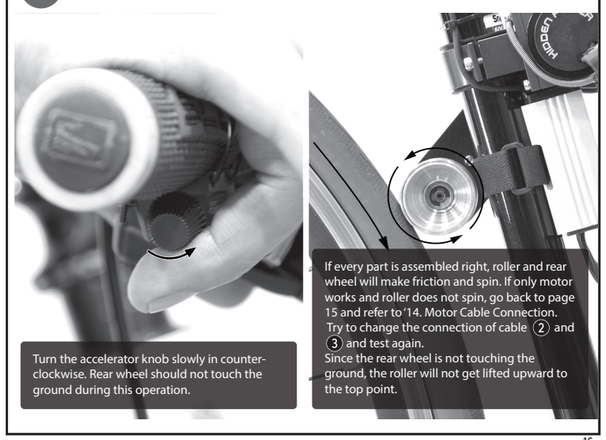


## 16 Test – Battery Socket Connection




Connect the battery in right +/- sockets. If the direction changes, power will not be delivered, thus check the direction before connecting.

## 17 Test



Turn the accelerator knob slowly in counter-clockwise. Rear wheel should not touch the ground during this operation.

If every part is assembled right, roller and rear wheel will make friction and spin. If only motor works and roller does not spin, go back to page 15 and refer to '14. Motor Cable Connection. Try to change the connection of cable ② and ③ and test again.
Since the rear wheel is not touching the ground, the roller will not get lifted upward to the top point.